

CVEN 305 Honors - Homework #4 Supplemental Problems

- 1) Shaft AB consists of n homogeneous cylindrical elements, which can be solid or hollow. Its end A is fixed, while its end B is free, and it is subjected to the loading shown. The length of element i is denoted by L_i , its outer diameter by OD_i , its inner diameter by ID_i , its modulus of rigidity by GI , and the torque applied to its right end by T_i , the magnitude of this torque being assumed to be positive if T_i is counterclockwise from end B and negative otherwise. (Note that $ID_i = 0$ if the element is solid.) (a) Write a computer program that can be used to determine the maximum shearing stress in each element, the angle of twist of each element, and the angle of twist of the entire shaft. (b) Use this program to solve the homework problems given in McGraw-Hill Connect.

Copyright © McGraw-Hill Education. Permission required for reproduction or display.

